

# Deploying AI Agents in the Cloud - AWS

18 Marzo 2025



# AGENDA



**Introduction to AI Agents**



**Building an AI Agent using  
Amazon Bedrock**



**Create your Agent**

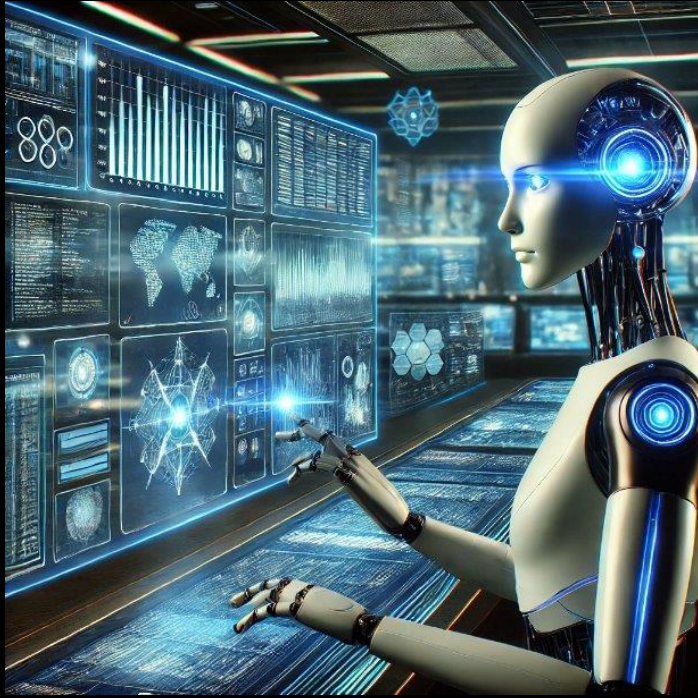


**Conclusions**



# Introduction to AI Agents

# AI AGENTS



An AI Agent is a software capable of:

1. **Interacting** with the environment and collecting data
2. Making **data-driven decisions** without direct human intervention
3. **Performing tasks** autonomously to achieve predetermined goals

# KEY PRINCIPLES OF AI AGENTS

## Perceptive

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Detect  
information  
through  
physical or  
software sensors

## Rational

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Make optimal  
decisions  
based on the  
collected data

## Autonomous

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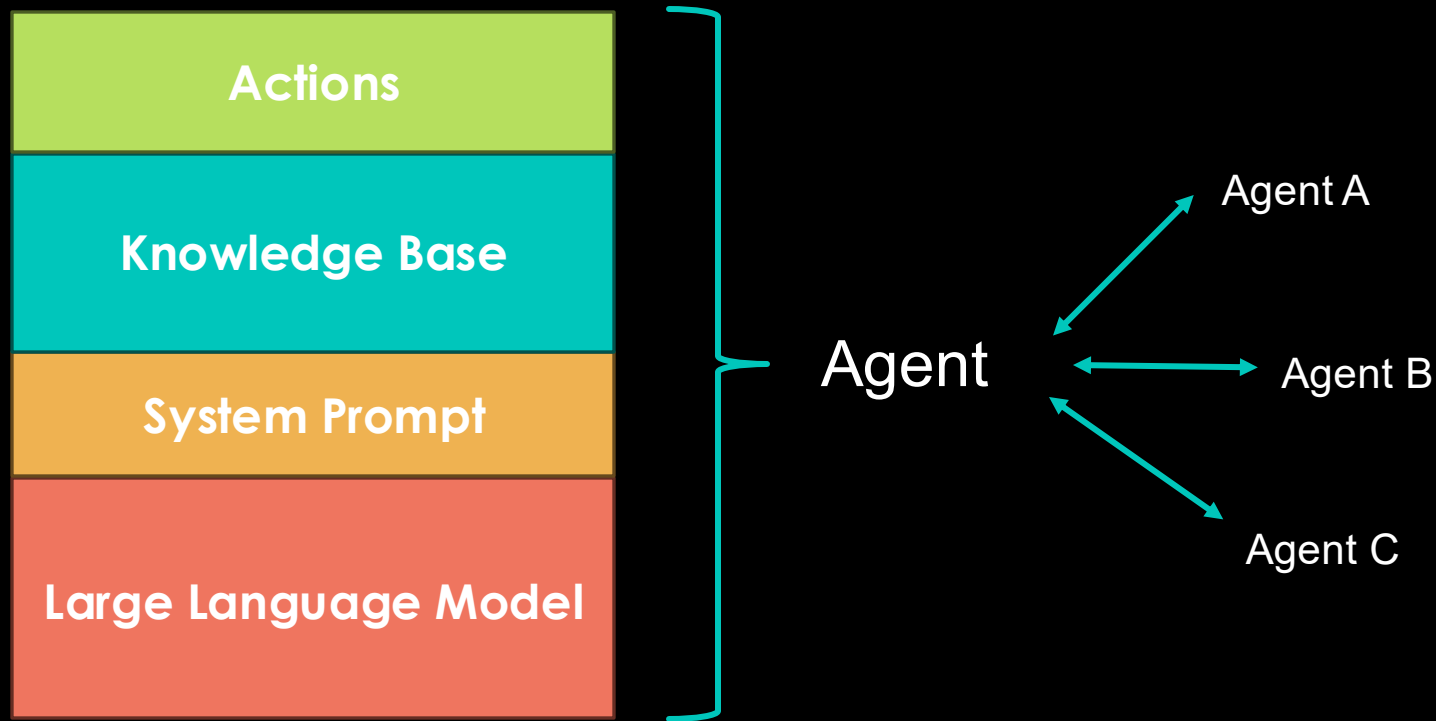
Apply the  
gathered data  
to select the  
best course of  
action

# BENEFITS OF AI AGENTS



1. **Increased Productivity:** automate repetitive tasks
2. **Cost Reduction:** remove inefficiencies and reduce human error
3. **Enhanced User Experience:** improve interaction with existing software

# COMPONENTS OF AN AI AGENT



A dark gray geometric shape, resembling a stylized arrow or a corner of a square, pointing towards the right. It occupies the left side of the image.

# Building an AI Agent using Amazon Bedrock



# AMAZON BEDROCK

Amazon Bedrock is an AWS service to create generative AI applications based on Foundation Models.



- **Advanced Automation:** create AI Agents to perform complex tasks
- **Integration:** Straightforward connection with external systems, API and DB
- **Security and reliability:** Bedrock Guardrails protects against hallucinations and harmful content

# AGENTS FUNCTIONALITIES IN BEDROCK



Retrieval  
Augmented  
Generation



Memory  
Retention



Automated  
Task  
Management



Code  
Execution

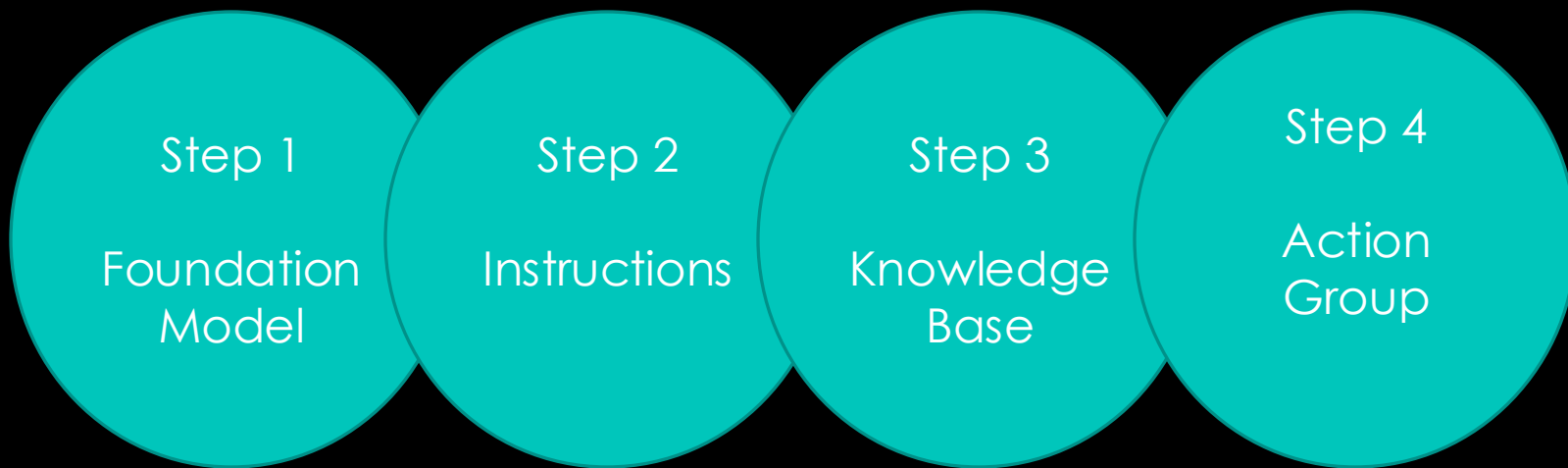


Auto Creation  
of System  
Prompt

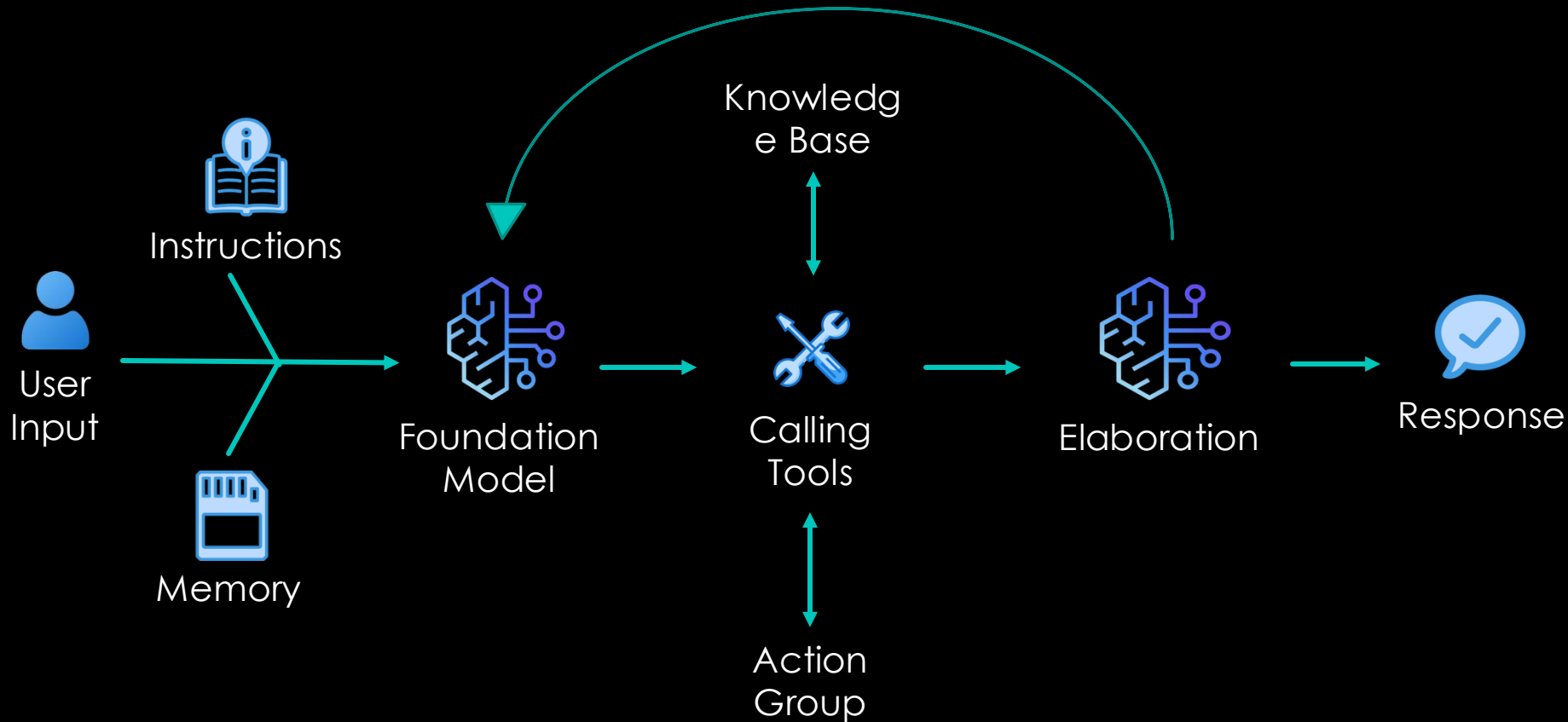


MultiAgent  
Collaboration

# AGENT CONFIGURATION

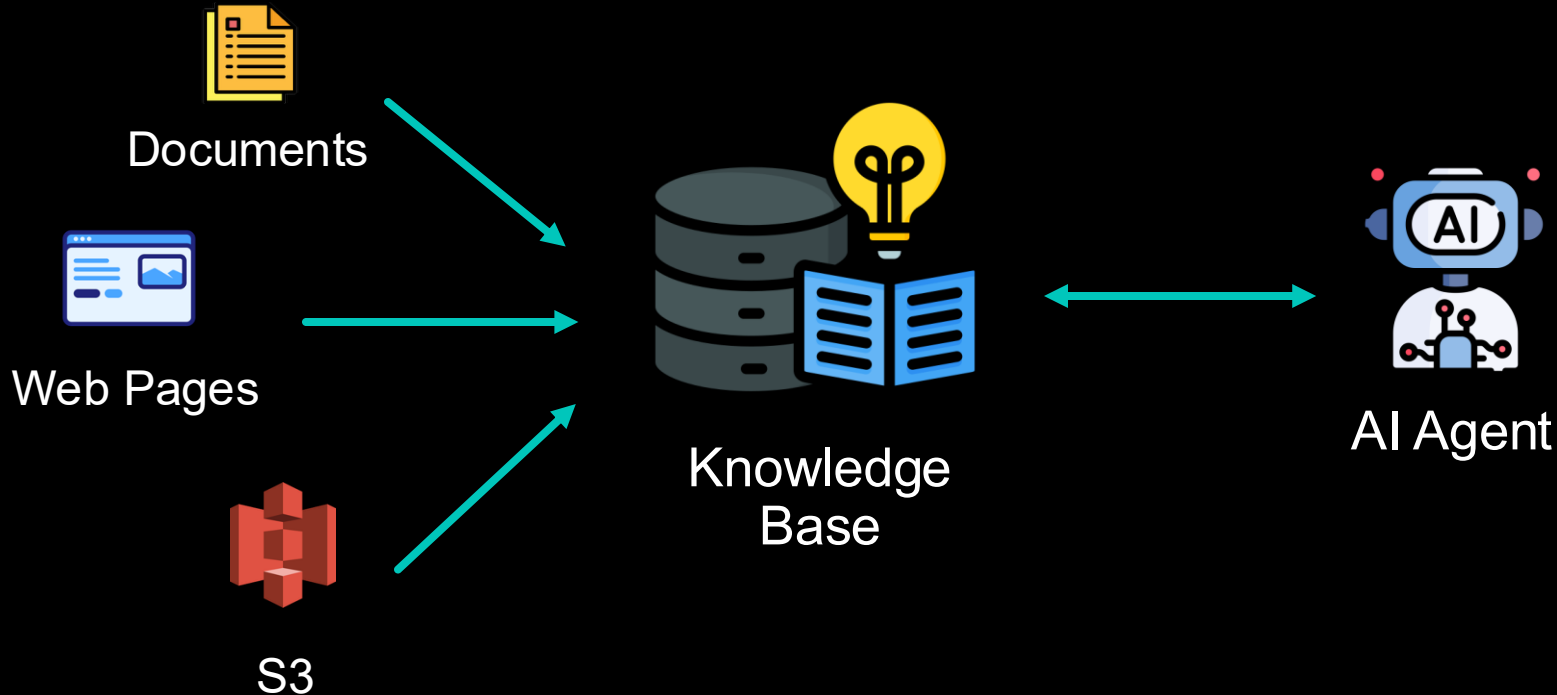


# EXECUTION

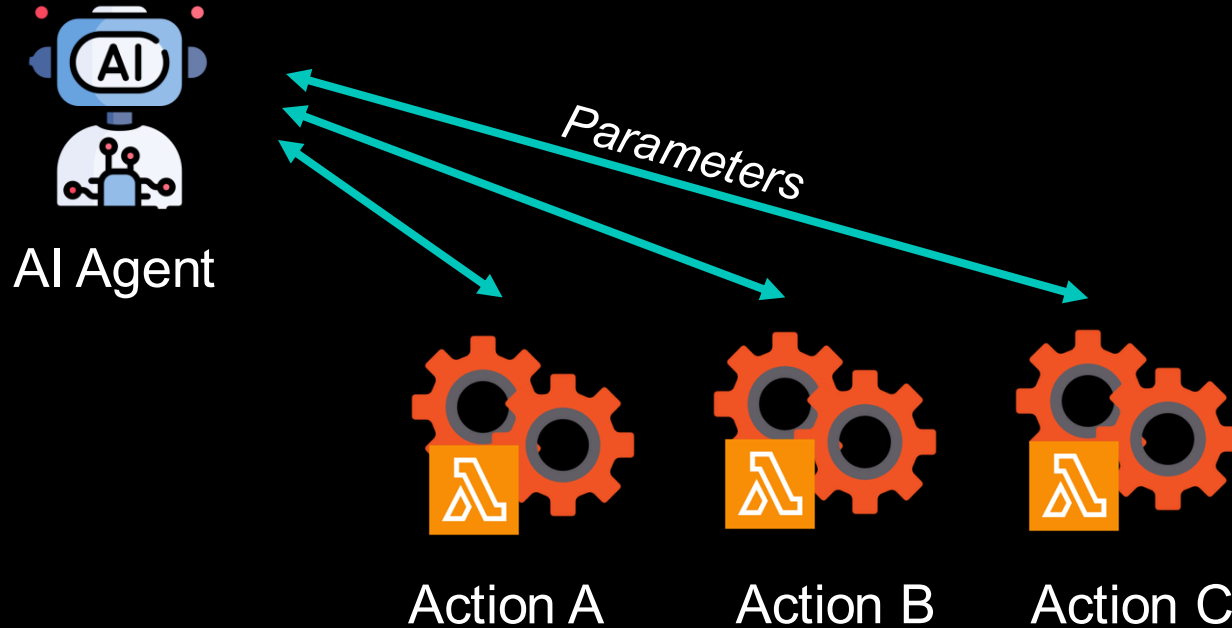


# KNOWLEDGE BASE AWS

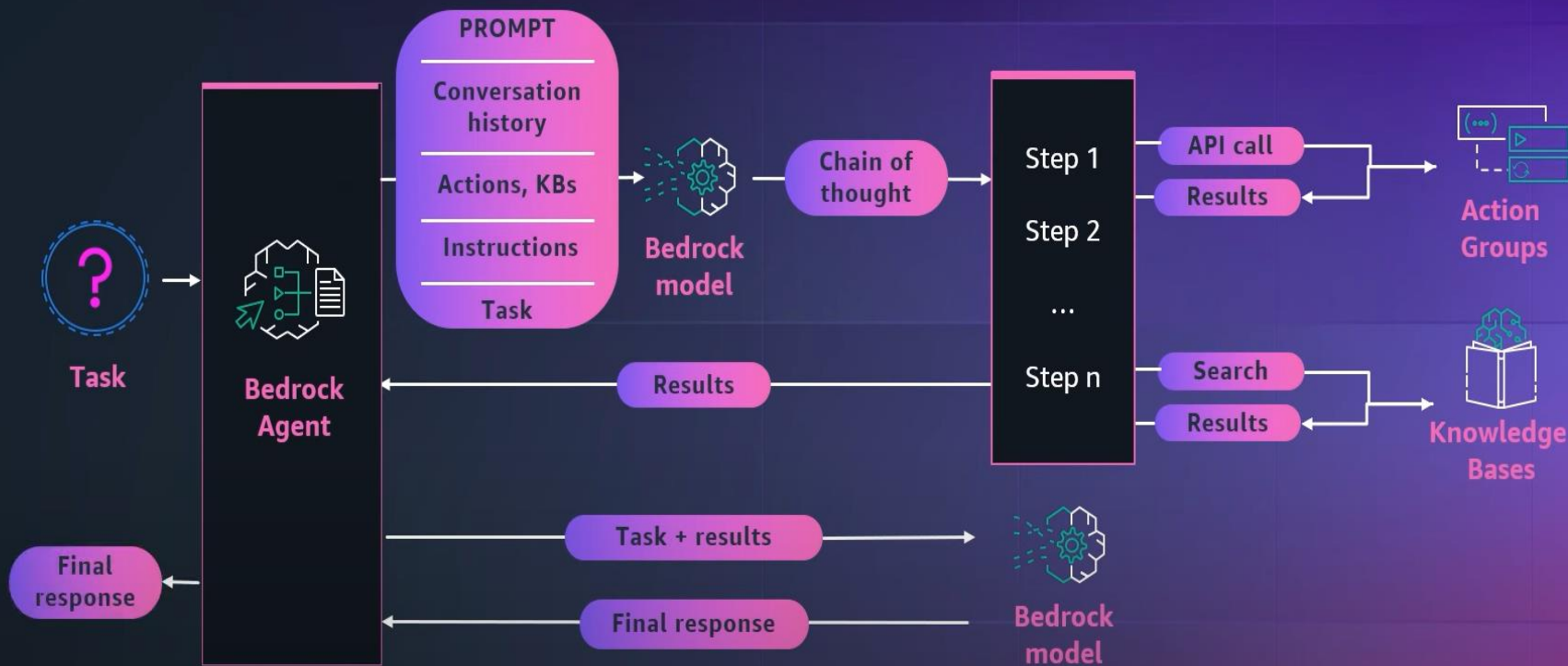
Structured archive for quick and targeted access to information.



# ACTION GROUPS AWS



# Agent orchestration – Detailed flow



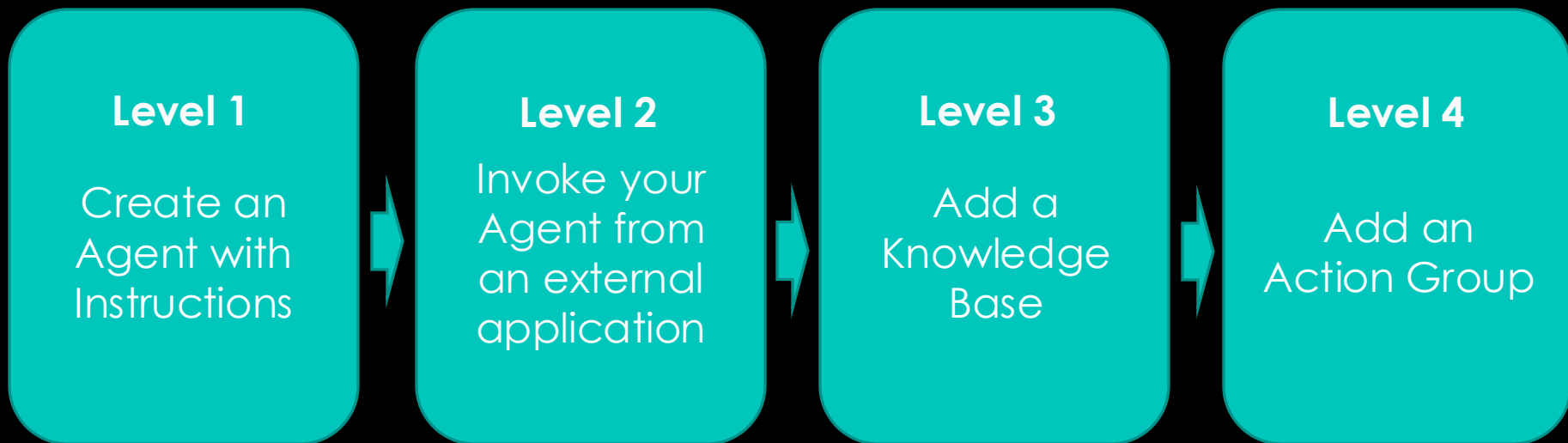
Agent breaks task into subtasks, determines the right sequence, and executes actions and knowledge searches on the fly

A large, dark gray abstract shape on the left side of the image, resembling a stylized arrow or a corner of a page.

Create your  
Agent



# LEVELS OF AGENT DEVELOPMENT





**THANK YOU!**